REMARKS

Claims 1-9 are pending in this application. Applicants thank the Examiner for the indication that claims 5, 6 and 8 contain allowable subject matter. Reconsideration based on the following remarks is respectfully requested.

Claims 1-4, 7 and 9 are rejected under 35 U.S.C. §102(e) over Li et al. (U.S. Patent No 6,938,412; hereinafter "Li"). The rejection is respectfully traversed.

Li does not teach or render obvious every claimed feature of independent claims 1 and 9. Li does not teach or render obvious, "an exhaust purification device for an internal combustion engine having, a NO_x storing catalyst arranged in an engine exhaust passage," as recited in independent claim 1, and similarly in independent claim 9 (emphasis added).

The Office Action asserts that col. 2, lines 26-37 and col. 5, lines 15+ of Li teach an exhaust purification device for an internal combustion engine having, a NO_x storing catalyst arranged in an engine exhaust passage. However, Li merely teaches two lean NO_x traps, the apparatus of Li combines a close-coupled cold start LNT (lean NO_x trap) 11 with a main LNT (lean NO_x trap) 12 (see col. 3, lines 62-64 of Li). Li does not disclose a single NO_x storing catalyst. Therefore, Li does not teach, or render obvious, all of the claimed features of independent claims 1 and 9.

Li also does not teach or render obvious, "cold storing nitrogen dioxide NO_2 contained in the exhaust gas in the NO_x absorbent when not activated and hot storing cold stored nitrogen dioxide NO_2 in the NO_x absorbent when activated," as recited in independent claims 1 and 9 (emphasis added).

The Office Action asserts that col. 2, lines 26-37 and col. 5, lines 15+ of Li teaches cold storing nitrogen dioxide NO_2 contained in the exhaust gas in the NO_x absorbent when not activated and hot storing cold stored nitrogen dioxide NO_2 in the NO_x absorbent when activated. However, Li merely teaches storing NO_x in the close-coupled cold start lean NO_x

trap 11 during an engine cold start. Li is silent regarding cold storing nitrogen dioxide NO_2 contained in the exhaust gas in the NO_x absorbent when not activated and hot storing cold stored nitrogen dioxide NO_2 in the NO_x absorbent when activated. Moreover, Li fails to teach or render obvious "at least raising the temperature of said NO_x storing catalyst to a predetermined temperature to activate it when a predetermined NO_x storing catalyst restoring condition is met so as to restore the cold storing capability of said NO_x absorbent in the state where said NO_x storing catalyst is not activated," as recited in independent claim 1, and similarly in independent claim 9. More specifically, Li fails to teach or render obvious a mechanism wherein, when the temperature of the NO_x storing catalyst is low and therefore it is not activated, NO_2 is stored, and when the temperature of the NO_x storing catalyst is raised in temperature to be activated, then the NO_2 is released in the form of NO, is then oxidized to NO_2 by the activated precious metal catalyst of the recited NO_X storing catalyst, and finally is stored in the form of NO_3^-. Therefore, Li does not teach, or render obvious, all of the claimed features of independent claims 1 and 9.

Li also does not teach or render obvious, "executing a NO_x storing catalyst restoring control including at least raising the temperature of said NO_x storing catalyst to a predetermined temperature to activate it when a predetermined NO_x storing catalyst restoring condition is met so as to restore the cold storing capability of said NO_x absorbent in the state where said NO_x storing catalyst is not activated," as recited in independent claim 1, and similarly in independent claim 9 (emphasis added).

The Office Action asserts that col. 2, lines 26-37 and col. 5, lines 15+ of Li teaches executing a NO_x storing catalyst restoring control including at least raising the temperature of said NO_x storing catalyst to a predetermined temperature to activate it when a predetermined NO_x storing catalyst restoring condition is met so as to restore the cold storing capability of

said NO_x absorbent in the state where said NO_x storing catalyst is not activated. Li merely teaches regenerating the close-coupled LNT 11 by turning the engine 13 off and turning on a heater 15 on the close-coupled LNT 11 and an air flow member 14 for a brief period of time (see col. 4, line 55 - col. 5, line 14 of Li). Li is silent regarding executing a NO_x storing catalyst restoring control including at least raising the temperature of said NO_x storing catalyst to a predetermined temperature to activate it when a predetermined NO_x storing catalyst restoring condition is met so as to restore the cold storing capability of said NO_x absorbent in the state where said NO_x storing catalyst is not activated. Therefore, Li does not teach, or render obvious, all of the claimed features of independent claims 1 and 9.

Therefore, for at least these reasons, independent claims 1 and 9 are patentable over Li. Claims 2-8 depend from independent claim 1, thus claims 2-8 are also patentable over the applied references for at least their dependency on independent claim 1, as well as for the additional features they recite.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-9 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

James A. Oliff
Registration No. 27,075

Michael D. Gagliano
Registration No. 62,037

JAO:MDG/add

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OLIFF & BERRIDGE, PLC
P.O. Box 320850
Alexandria, Virginia 22320-4850
Telephone: (703) 836-6400

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